

**ABSTRACT**

[0130] There is provided an economical carburizing method and carburization apparatus capable of carrying out carburizing treatment with a quality as high as that in a normal case and a high reproducibility even if carburizing conditions differ from those in a normal case. A carburization apparatus for carrying out carburization in an atmosphere gas containing not more than 30% by volume of carbon monoxide under a pressure of 13 to 4,000 Pa has a carburizing chamber 3 for housing an object 4 to be treated; an oxygen sensor 20 for measuring an oxygen concentration in the atmosphere gas in the carburizing chamber 3 during carburization; and a mass flow controller 5 for adjusting a composition of the atmosphere gas in the carburizing chamber 3 according to a measurement result by the oxygen sensor 20.